Dayeon (Zoey) Ki

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Research Interests

- Machine Translation
- Cross-Cultural NLP
- Large Language Model Alignment
- Multilingual NLP

Education

University of Maryland, College Park — Sep. 2023 – Present
Ph.D. in Computer Science — *Maryland, United States*
Supervisor: Marine Carpuat, Tianyi Zhou

Korea University — Mar. 2019 – Jun. 2023
Bachelor of Statistics, Bachelor of Computer Science and Engineering — *Seoul, S.Korea*
Summa Cum Laude

International School of Prague — Feb. 2015 – May 2018
Prague, Czech Republic

Publication

(* denotes equal contribution)

[1] Should I Share this Translation? Evaluating Quality Feedback for User Reliance on Machine Translation
Dayeon Ki, Kevin Duh, Marine Carpuat
Under Review (EMNLP 2025)

[2] Beyond Benchmarks: Exploring Machine Translation Error Perception and Reliance Among the General Public
Yimin Xiao, Yongle Zhang, Dayeon Ki, Calvin Bao, Marianna Martindale, Charlotte Vaughn, Ge Gao, Marine Carpuat
Under Review (EMNLP 2025)

[3] GraphicBench: A Planning Benchmark for Graphic Design Generation with Language
Dayeon Ki, Tianyi Zhou, Marine Carpuat, Gang Wu, Puneet Mathur, Viswanathan Swaminathan
Under Review (COLM 2025)

[4] AskQE: Question Answering as Automatic Evaluation for Machine Translation
Dayeon Ki, Kevin Duh, Marine Carpuat
ACL 2025 Findings

[5] Multi-LLM Agents Debate for Equitable Cultural Alignment
Dayeon Ki, Rachel Rudinger, Tianyi Zhou, Marine Carpuat
ACL 2025

[6] Automatic Input Rewriting Improves Translation with Large Language Models
Dayeon Ki, Marine Carpuat
NAACL 2025

[7] Guiding Large Language Models to Post-Edit Machine Translation with Error Annotations
Dayeon Ki, Marine Carpuat
NAACL 2024 Findings

[8] Cross-lingual QA: A Key to Unlocking In-context Cross-lingual Performance
Sunkyoung Kim*, Dayeon Ki*, Yireun Kim, Jinsik Lee
ICML 2024 ICL Workshop

[9] Mitigating Semantic Leakage in Cross-lingual Embeddings via Orthogonality Constraint
Dayeon Ki, Hyunjoong Kim, Cheonbok Park
ACL 2024 RepL4NLP Workshop

[10] Towards Accurate Translation via Semantically Appropriate Application of Lexical Constraints
Yujin Baek*, Koanho Lee*, Dayeon Ki, Hyoung-Gyu Lee, Cheonbok Park, Jaegul Choo
ACL 2023 Findings

Academic Experience

Visiting Scholar Jun. 2025 – Aug. 2025
Johns Hopkins University *Baltimore, United States*
- Supervisor: *Kevin Duh*
- Participated in the SCALE program.

Undergraduate Researcher Dec. 2022 – Jun. 2023
Language and Knowledge Laboratory (KAIST) *Seoul, S.Korea*
- Supervisor: *Minjoon Seo*
- Collaborated with Korea Meteorological Administration to develop weather commentary generation and weather database retrieval model.

Undergraduate Researcher Feb. 2022 – Nov. 2022
Data and Visual Analytics Laboratory (KAIST) *Seoul, S.Korea*
- Supervisor: *Jaegul Choo*
- Collaborated with NAVER Papago to develop context-aware neural machine translation model in lexically constrained settings [6].

Industry Experience

Research Scientist Intern May. 2024 – Dec. 2024
Adobe Research *California, United States*
- Developed a multi-agent planning benchmark 'CreativeTown' for creative content generation tasks.
- Evaluated performance of multimodal LLM agents on both planning and execution stage.

Research Intern Jan. 2023 – Jun. 2023
NAVER Cloud, Papago *Seoul, S.Korea*
- Focused on solving semantic leakage, where a significant amount of language-specific information is unintentionally leaked into semantic representations, present in current representation learning methods.
- Developed model with our training objective, Orthogonality Constraint Learning (ORACLE) to disentangle language bias and semantics in cross-lingual sentence embeddings, leading to effective parallel data mining [7].

Research Intern Aug. 2022 – Dec. 2022
LG AI Research *Seoul, S.Korea*
- Participated in developing and evaluating LG's billion-scale bilingual Large Language Model, EXAONE.
- Experimented shot variations and few shot example selection methods leveraging re-ranking models based on similarity metrics, which led to improved generalization ability than previous methods.
- Developed novel cross-lingual prompting techniques to enhance cross-lingual transfer of Large Language Models [6].

Co-Founder & Software Engineer Aug. 2020 – Dec. 2021
Da-Chae *Seoul, S.Korea*
- Developed convolutional neural network-based framework which updates parameters in the direction of minimizing parameters between image pixels.
- Enhanced UI/UX flow for better recommendation of paintings based on users' interior theme.
- Participated in multiple investment meetings with Donghwa Corp. and Hankook Ilbo.

Teaching

(CMSC320) Introduction to Data Science | *Teaching Assistant* Aug. 2023 – Dec. 2023

(GEST151) Data Science and Artificial Intelligence | *Student Mentor* Mar. 2022 – Jun. 2022

(GEST151) Data Science and Artificial Intelligence | *Student Mentor* Mar. 2021 – Jun. 2021

- Nominated as *Best Mentor* through mentors and students' survey.
- Instructed weekly lectures and lab sessions using R and Python.
- Guided 60+ students' final projects in preparation for the Data Science Grand Conference.

KUBIG NLP BoostCamp Course | *Lecturer* Jan. 2021 – Feb. 2021

Extracurricular Activities

Vizable | *Team-Leader, Staff* Jan. 2022 – Jun. 2022

- Studied and created various dashboards using data visualization tool Tableau.

KUBIG (Data Science Society of Korea University) | *President* Dec. 2020 – Jul. 2022

- Led multiple collaboration meetings with IT service companies (*Makina-Rocks*) for industry-academic research collaboration projects.
- Conducted team-based projects: Lecture review summarization, GPT-2 based Curriculum Vitae generation.
- Instructed Winter 2021 NLP Bootcamp course for the whole society members.

KUBA (Korea University Budy Assistant) | *Staff* Jul. 2020 – Dec. 2020

- Planned and organized peer mentoring programs for the international exchange students at Korea University.

Koala Univ. Data Science Club | *Member* Mar. 2020 – Jun. 2020

- Lead multiple courses on data crawling, data processing and machine learning based analyzing techniques.
- Participated and advanced as finalist at *Koala Univ Hackathon*.

Invited Talks

Oct. 2024 University of Toronto, Ontario Tech University
Oct. 2017 TEDxYouth ISP
Mar. 2017 Applied Linguistics Presentation @ Charles University

Honors & Rewards

2023-2025 Dean's Scholarship, Department of Computer Science, University of Maryland, College Park
Dec. 2022 Dean's List Scholarship, Department of Statistics, Korea University
Aug. 2021 Finalist, Korea Univeristy Capstone Datathon
Jun. 2021 Best Teaching Mentor, Data Science and Artifical Intelligence
Apr. 2021 Tableau Desktop Specialist
Apr. 2021 SQLD (SQL Developer), Korea Data Agency
Apr. 2021 ADSP (Advanced Data Analytics semi-Professional), Korea Data Agency
Oct. 2020 Runner-up, Seoul Entrepreneurship Competition
Aug. 2020 Runner-up, Korea Artificial Intelligence Hackathon
2016-2017 University of Waterloo Math Representative

Technical Skills

Programming Languages: Python, R, SQL
Developer Tools: Docker, VS Code, PyCharm
Technologies/Frameworks: Pytorch, Tensorflow, Linux, Github, LaTeX, HuggingFace, Tableau

Language Proficiency

Bilingual in English and Korean (native)

- International school experience in China (2004-2011) and Czech Republic (2015-2018)
- TOEFL iBT : 111/120 (Reading: 29, Listening: 30, Speaking: 27, Writing: 25)
- SAT : 1460/1600 (Reading & Writing: 660, Math: 800)

Conversational in French

- DELF B2

Beginner in Chinese